



# U.S. DEPARTMENT OF **ENERGY**

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## **Tiny Bubbles Key to Speedier Radioactive Waste Processing**

### ***Recovery Act increases production of DWPF waste canisters***

Aiken, SC -- This week, the Department of Energy's Savannah River Site's (SRS) marked the beginning of a new waste canister production era at the facility by adding equipment to blow bubbles into the Defense Waste Processing Facility (DWPF) melter. The new bubbler, purchased with American Recovery and Reinvestment Act funds, will substantially increase the production of vitrified waste at the nation's largest nuclear waste processing facility by helping to maintain a more uniform temperature throughout the molten glass and allow higher temperature operation that will produce the best glass form and increase the flow and pour rate.

Terry Spears, DOE Assistant Manager for Waste Disposition Project at SRS, said he is very impressed with the bubbler technology and its potential for increasing DWPF canister production. "It's very gratifying to see a plan turning into reality," said Spears. "I think it gives us significant promise that we will increase (canister) productivity."

The bubblers are expected to increase the annual canister production from nearly 215 to a projected 325. Additional enhancements in the melting process at DWPF are projected to further increase the annual canister production rate to 400. Increasing the annual liquid waste processing rate at DWPF will enable SRR to close 22 liquid waste tanks in 8 years.

Part of a \$7 million project funded by the Recovery Act, the bubblers will insert argon gas bubbles into an 80-ton melter at DWPF containing as much as 14,000 tons of a glass and radioactive waste mixture heated to more than 2000 degrees Fahrenheit.

The bubblers operating at SRS were modified from existing technology by Catholic University's Vitreous State Laboratory (VSL) under contracts with SRR to improve DWPF melter performance. The bubbler equipment, installed in the DWPF melter this past week during a planned outage, was fabricated in Seattle, WA, shipped to SRS and viewed last week by SRS officials during an inspection and equipment mockup demonstration.

DWPF has been in operation since March 1996 processing radioactive liquid waste previously stored in the Site's 51 underground storage tanks. Through August 31, 2010, the waste processing facility has produced 11.5 million pounds of glass stored in 2978 canisters held at the site.

Additional information on the Department of Energy's Office of Environmental Management and the Savannah River Site, can be found at <http://www.em.doe.gov> or <http://www.srs.gov>. For more information about the SRS Recovery Act Project, please visit [www.srs.gov/recovery](http://www.srs.gov/recovery).

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**Photo caption:**

Savannah River Remediation personnel brief Terry Spears, DOE Assistant Manager for Waste Disposition Project at SRS, and his staff on the installation of bubblers at Defense Waste Processing Facility. The photograph was taken in a non-radiological facility and shows SRR workers mocking up the bubbler in DWPF Melter No. 3.

